DEVETECH ELECTRONICS CO. LTD

LED LAMP (Ø3 YG)
CUSTOMER: DACHS ELECTRONICA
P/N: DVL311MG

DESIGNED BY	
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APPROVED BY	

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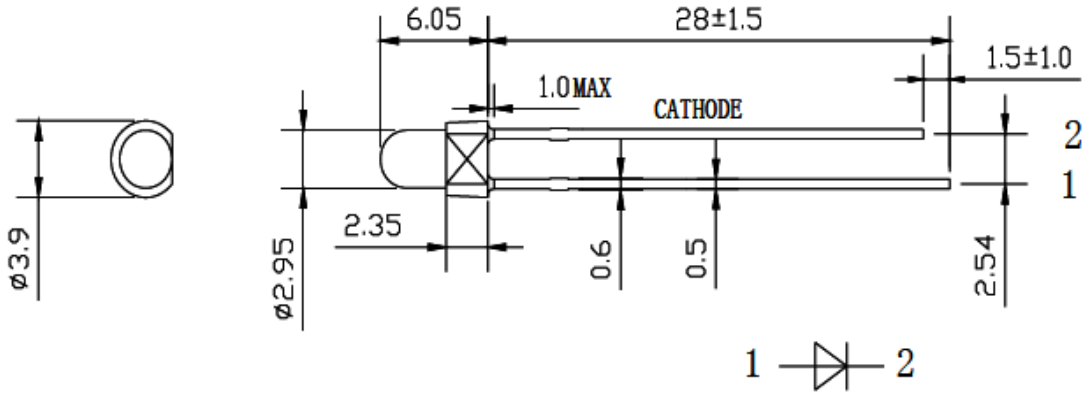
1. FEATURES

* Ø3 DIAMETER LAMP
* LOW CURRENT REQUIREMENT
* LOW POWER CONSUMPTION
* VERSATILE MOUNTING ON P.C. BOARD PANEL
* LONG LIFE-SOLID STATE RELIABILITY

2. PACKAGE DIMENSIONS



Y-GREEN

Notes:
1. All dimensions are in millimeters.
2. Tolerance is ±0.25mm, unless otherwise noted.

3. CENTRAL INFORMATION

Part No.	Chip material	Emitting color	Lens type	Iv (mcd) 20mA			Viewing angle
				Min.	Typ.	Max.	2θ1/2
DVL311MG	AlGaInP	Y-GREEN	Green Diffused	10	30	-	60º

Note:
θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

4. ELECTRICAL / OPTICAL CHARACTERISTICS AT T_A=25ºC

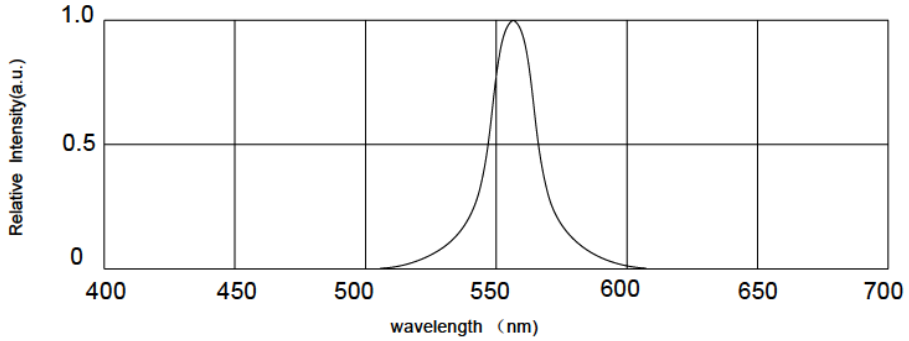
Parameter	Symbol	Min.	Typ.	Max.	Units	Test conditions
Forward voltage	V_F	1.8	2.1	2.4	V	I_F=20mA
Peak wavelength	λ p	-	-	-	nm	I_F=20mA
Dominate Wavelength	λ D	568	571	576	nm	I_F=20mA
Spectral line half-width	Δ λ	-	20	-	nm	I_F=20mA
Reverse current	I_R	-	0	10	uA	V_R=5V

5. ABSOLUTE MAXIMUM RATINGS AT TA=25ºC

Parameter	Symbol	Maximum ratings	Units
Power dissipation	Pd	70	mW
Forward current	I_F	25	mA
Peak forward current	I_F (Peak)	130	mA
Reverse voltage	V_R	5	V
Operating temperature	Topr	-40ºC to +85ºC	
Storage temperature	Tstg	-40ºC to +100ºC	
Solder temperature	Tsol	260ºC for 3 seconds	

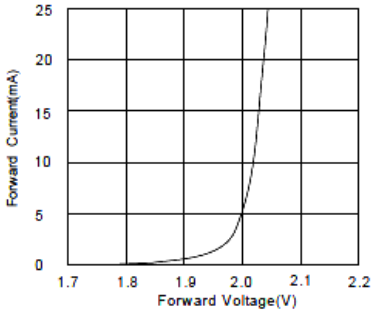
Note:
1. 1/10 duty cycle, 0.1ms pulse width.
2. 3mm below package base.
3. The production accord with the demand of RoHS.

6. RELATIVE INTENSITY VS WAVELENGTH CHART

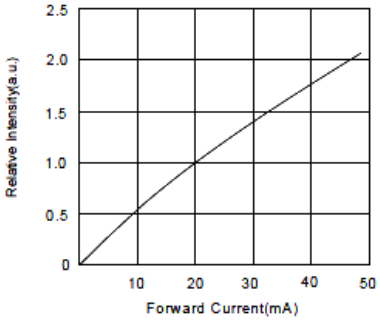


RELATIVE INTENSITY Vs. WAVELENGTH

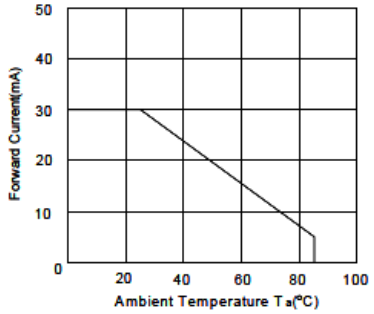
7. TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES



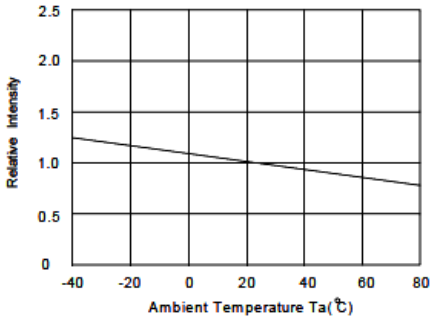
FORWARD CURRENT Vs. FORWARD VOLTAGE



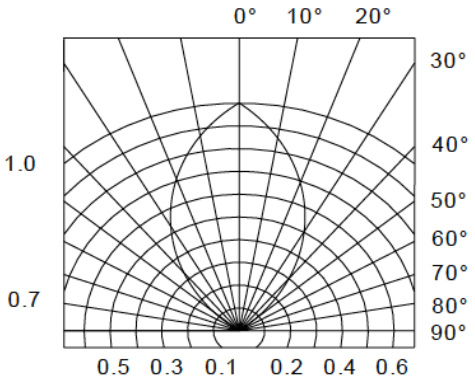
LUMINOUS INTENSITY Vs .FORWARD CURRENT



FORWARD CURRENT DERATING CURVE



RATIVE INTENSITY Vs. AMBIENT TEMPERATURE



RADIATION ANGLE

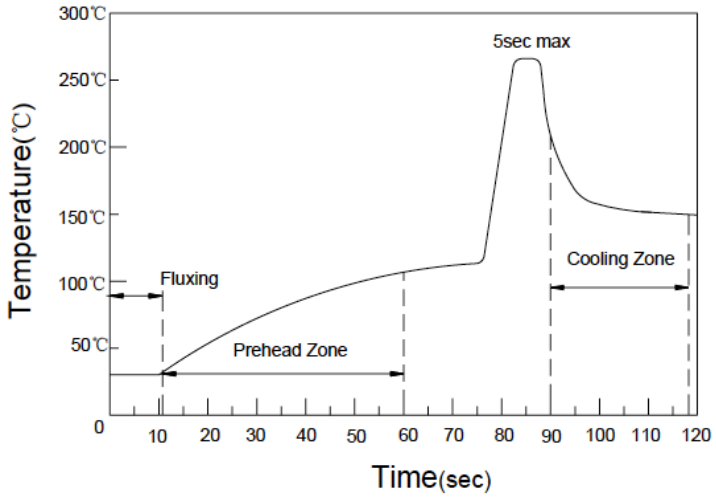
8. RELIABILITY

8.1. Test items and results

Test items	Test conditions	Sample quantity	Test results
Solder ability	Solder temperature: (235±5ºC) Solder duration: 5sec.	35	Good wetting
Resistance for soldering heat	(260º±5ºC) 10sec.	35	OK
Thermal shock	-40ºC ~ 25ºC ~ 100ºC ~ 25ºC 30min 5min 30min 5min	35	OK
High temperature and high humidity	Ta=85ºC RH=85%	35	OK
High temperature storage	Ta=100ºC	35	OK
Low temperature storage	Ta=-40ºC	35	OK
Life test	Ta=20ºC I_F=20mA	35	OK

8.2. Soldering instructions

1. Recommended soldering profile:



2. Dip and hand soldering should not be done more than one time.
3. Please note that stress to the leads and epoxy bulb should be avoided during soldering particularly when heated. After soldering the LED's should be protected from mechanical shock or stress before the LED's cool down to room temperature.
4. Cut the lead frames after the LED's return to room temperature.

NOTES